

What is claimed is:

1. An RFID tag installation system using two CCD cameras, two GPS receivers, an INS, a DMI and a sensor synchronizer, being
5 installed inside and outside of a vehicle, the system comprising:
 - a vehicle position(x, y, z) and yaw extractor by using the two GPS receivers;
 - an orientation(position, attitude) extractor for the vehicle by using INS;
 - 10 a GPS/INS/DMI integrator for GPS outage and for INS error correction in real time or a post-processing stage;
 - a camera interior/exterior orientation extractor for estimating lens distortion, focal length, principle point, and orientation of the CCD camera;
 - 15 a target position extractor for finding 3-dimensional coordinates of a road in which the RFID tag is installed;
 - a road information storage for providing road information such as a speed limit and a rout number of a road in which the RFID tag is installed;
 - 20 a RFID tag writer for inputting 3-dimensional coordinates and road information to the RFID tag; and
 - a RFID tag installer for installing the RFID tag on the road.
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2. The system of claim 1, wherein the RFID tag is
25 attached to a screw, a nail or a reflection plate, thereby

installed on the road.

3. An RFID tag installing method using two CCD cameras, two GPS receivers, an INS, a DMI and a sensor synchronizer, being
5 installed inside and outside a vehicle, the method comprising the steps of:

(a) calculating orientation of the vehicle by using GPS/INS/DMI integration in real time or post-processing;

10 (b) while the step (a) is performed, extracting camera interior /exterior orientation by using self-calibration;

15 (c) finding 3-dimensional coordinates of a road in which the RFID tag is installed by using camera interior/exterior orientation extracted at the step (b) , the vehicle orientation obtained at the step(a), and target region appearing in stereo images;

(d) inputting the road information supplied from a road information storage and the position information found at the step (c) to the RFID tag; and

(e) Installing the RFID tag on the road.

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4. The method of claim 3, wherein, in the step (d), the road information and the 3-dimensional coordinates are converted into a format for an RFID tag writer and inputted to the RFID tag.

25 5. The method of claim 3, wherein, in the step (e), the

RFID tag is attached to a screw, a nail or a reflection plate, and the screw, the nail or the reflection plate is installed on the road.

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